Linear Models Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Reading assignment Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_\_\_\_\_

**Use pages 78 and 79 to help you**

A **linear model** is a linear equation that models or represents a real-world problem.

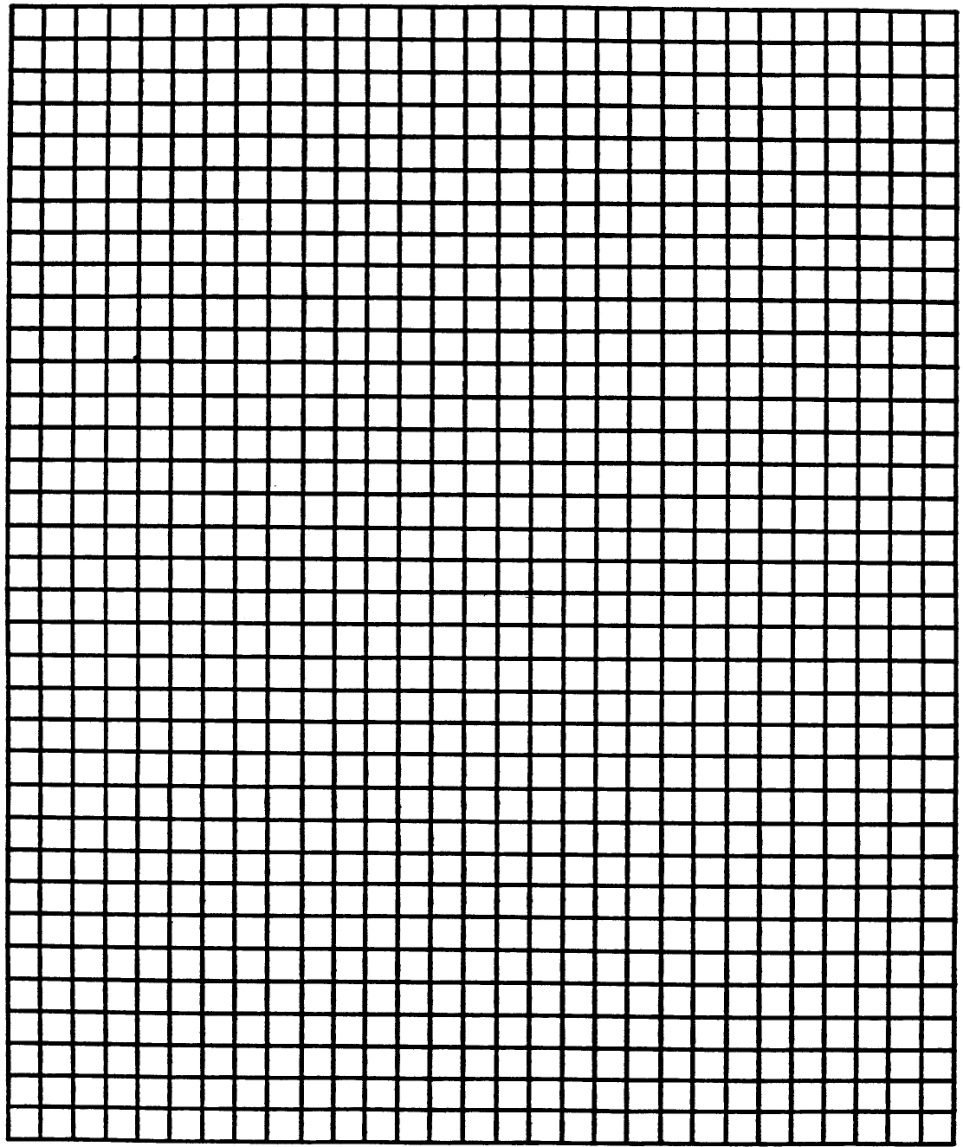
**Example 1: Given the slope and the y-intercept. Read the TRANSPORTATION problem.**

1. Use example 1 to fill in the blanks.

**Relate:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_= \_\_\_\_\_\_\_\_\_\_\_\_\_\_·\_\_\_\_\_\_\_\_\_\_+\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Define:** Let h =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Let t = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.  Label the x and y axis using the variables **h** and **t** to represent the hot air balloon problem. Then, graph your equation.
2. Explain what the h-intercept (0,12) represents in the problem.
3. Do check understanding from example 1.

**Example 2: You can use two data points from a linear relationship to write a model**

**Read the problem SCIENCE from example 2.**

1. **Define the variables:** x=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and y=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 1:** Identify the data points:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 2:** Use those sets of data points to find the slope. Show the work.

**Step 3:** Use one of those two data points from step 1 and the slope from step 2 and write the equation of the line in point-slope form.

**Step 4:** Transform your equation in step 3 into slope intercept form.

1. Answer the questions from Check Understanding.

a.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c.(Use steps 1-4 above to help you.)

Assignment: pg 81 #’s 2, 4 and 7